



NORTHWEST PIPELINE

P.O. Box 58900

3936 Salt Lal

Salt Lake City, UT 84158-0900 Phone: (801) 584-6851

FAX: (801) 584-7764

2008 JUN 19 A 9: 32

June 16, 2008

RECEIVED

Ms. Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

Re: Northwest Pipeline GP

Docket No. RP08-

Dear Ms. Bose:

Pursuant to Part 154 of the regulations of the Federal Energy Regulatory Commission (Commission), Northwest Pipeline GP (Northwest) tenders for filing and acceptance the following tariff sheets as part of its FERC Gas Tariff:

First Revised Sheet No. 204 First Revised Sheet No. 204-A First Revised Sheet No. 204-B Original Sheet No. 204-C

Original Sheet No. 204-D First Revised Sheet No. 205 Original Sheet No. 205-B

# Statement of Nature, Reasons and Basis for the Filing

The purpose of this filing is to propose revisions to the gas quality specifications in Northwest's tariff. Specifically, Northwest proposes to: 1) modify its current specification for dust, gums, and other impurities; 2) add a specification for toxic or hazardous substances; 3) add a specification for bacteria; 4) clarify that chromatographs are not the only means of identifying gas that does not meet Northwest's specifications; 5) add a provision that allows Northwest to require additional monitoring equipment to be installed at existing receipt points; and 6) modify its current specification for total sulfur.

# Bio-Gas and/or Landfill Gas Supplies

Northwest is compelled to propose the first five revisions listed above at this time because it has been contacted by numerous parties, one in particular that is interested in supplying Northwest's system with bio-gas or landfill gas in Fall 2008. Northwest has communicated to such supplier and others that it will be proposing revised tariff specifications to better address potential differences between bio-gas / landfill gas and existing gas supplies.

In anticipation of this new supply, Northwest is seeking the same balance that the Commission seeks in its policy statement, wherein the Commission states that "tariff provisions on gas quality and interchangeability need to be flexible to allow pipelines to

Ms. Kimberly D. Bose June 16, 2008 Page 2 of 5

balance safety and reliability concerns with the importance of maximizing supply"<sup>1</sup>. Northwest believes that maximizing supply options on its system is in the best interest of the pipeline and its shippers. Additionally, Northwest recognizes that bio-gas and landfill gas supply projects may reduce methane emissions and Northwest supports such a worthy goal. However, Northwest's primary concern has been, and will always be, to operate in a safe and reliable manner. Therefore, Northwest strongly believes that it is prudent to adopt the revisions proposed herein, which have already been approved by the Commission for other interstate pipelines, to protect the people in the communities which it serves.

### Total Sulfur

Northwest is compelled to propose the sixth revision listed above, the modification to its gas quality specification for total sulfur, based on a significant number of customer requests, as discussed below.

# Proposed Revised Tariff Provisions

### Sheet No. 204, Total Sulfur

Northwest is proposing, at this time, to reduce the acceptable amount of total sulfur in its gas quality specification from twenty grains per one hundred cubic feet to five grains per one hundred cubic feet. To the best of Northwest's knowledge, Northwest and its customers, end-users and interconnecting parties agree that the current specification of twenty grains is unacceptably high and out of the normal range for pipelines in the United States and that Northwest's current total sulfur specification should be lowered. However, parties have not yet agreed as to the amount of reduction that should occur. Based on the tariffs and/or practices of Northwest's interconnecting parties, the highest acceptable amount of total sulfur is five grains per one hundred cubic feet (which is the tariff specification for Westcoast Energy Inc²). Therefore, a large majority of Northwest's customers have asked Northwest to take an interim step to lower the acceptable total sulfur specification from twenty grains to five grains per one hundred cubic feet. Northwest will agree to continue discussions with its customers, end-users and interconnecting parties as to whether further reductions should be proposed.

# Sheet Nos. 204-A and 204-C, Dust, Gums, etc.

Northwest is proposing to expand its current specification which disallows dust, gums, and other solid matter to further disallow objectionable odors and gum forming constituents which interfere with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow. The Commission has approved numerous tariff provisions with nearly identical language<sup>3</sup> to that being proposed. Indeed, Northwest

<sup>1</sup> Policy Statement on Provision Governing Natural Gas Quality and Interchangeability in Interstate Natural Gas Pipeline Company Tariffs (115 FERC ¶61,325).

<sup>2</sup> See Tariff Page No. 12.3 for Westcoast Energy Inc. Note that Westcoast uses a different unit of measure than Northwest (mg/m<sub>3</sub>) which, when converted, closely approximates five grains per one hundred cubic feet.

<sup>3</sup> See Tariff Sheet No. 99 for Transwestern Pipeline Company, LLC, Tariff Sheet No. 84 for Kern River Gas Transmission, and Tariff Sheet No. 267 for TransColorado Gas Transmission Company LLC.

Ms. Kimberly D. Bose June 16, 2008 Page 3 of 5

already has this revised provision in its tariff for its La Plata receipt point. It is now being proposed herein for all other receipt points.

# Sheet Nos. 204-A and 204-D, Toxic or Hazardous Substance

Northwest is proposing to add a specification to disallow toxic or hazardous substances which may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or contrary to government standards. In addition to the Commission having already approved numerous tariff provisions with nearly identical language<sup>4</sup> to that being proposed, Northwest finds no reason that any party should be opposed to this specification. Indeed, Northwest already has this proposed provision in its tariff for its La Plata receipt point. It is being proposed herein for all other receipt points.

# Sheet Nos. 204-B and 204-D, Bacteria

Northwest is proposing to add a specification (for the La Plata receipt point as well as all other receipt points) which disallows microbiological organisms (including sulfate reducing bacteria and acid producing bacteria) capable of causing injury to pipeline facilities or interfering with the proper operation of pipeline facilities. These limitations have been narrowly crafted to target only the bacteria capable of causing injury or interference. Additionally, the Commission has approved tariff provisions with nearly identical language<sup>5</sup> to that being proposed.

# Sheet No. 205, Failure to Meet Specifications

Northwest is proposing to clarify that verifiable evidence, other than evidence derived from a chromatograph, is allowable as a basis for refusing to accept gas that fails to meet the gas quality specifications in its tariff. The current tariff language incorrectly implies that all disallowed constituents can be detected by a chromatograph. The revised language maintains the concept that both Shipper(s) and Transporter (Northwest) have the right to reject gas that does not meet the gas quality specifications in the tariff and also acknowledges that a chromatograph is not the only tool that can be used to determine that gas does not meet the specifications.

# Sheet No. 205-B, Gas Analysis Equipment

Northwest is proposing to clarify its longstanding policy of requiring the interconnecting party at a receipt point to assume the financial responsibility for equipment deemed necessary to enable Northwest to ascertain that the gas entering its system meets the gas quality specifications in its tariff. Northwest and interconnecting parties generally enter into a facilities agreement which specifies that the interconnecting party will bear the costs of the interconnecting facilities upon initial construction. This provision clarifies that if Northwest should later determine that <u>additional</u> equipment is deemed necessary, the burden of the cost still lies with the interconnecting party. The Commission has approved

<sup>4</sup> See Tariff Sheet No. 99 for Transwestern Pipeline Company, LLC, Tariff Sheet No. 131 for ANR Pipeline Company, and Tariff Sheet No. 211 for El Paso Natural Gas Company. 5 See Tariff Sheet No. 181 for Williston Basin Interstate Pipeline Company, Tariff Sheet No. 213 for Equitrans, L.P., and Tariff Sheet No. 520 for Algonquin Gas Transmission Company.

Ms. Kimberly D. Bose June 16, 2008 Page 4 of 5

nearly identical language<sup>6</sup> to that being proposed.

# Summary

Northwest distributed advance copies of the attached redlined tariff sheets at a shipper meeting, posted such sheets on its website and convened a conference call to discuss the tariff revisions proposed herein. Northwest has received only positive feedback and has been encouraged to expedite this filing by its shippers. Northwest believes that these tariff revisions will allow Northwest to: 1) provide suppliers the certainty (as to gas quality specifications) that they need to go forward with bio-gas and/or landfill gas supply projects; 2) treat all interconnecting parties on a non-discriminatory basis; 3) maximize supply opportunities for Northwest and it shippers; 4) ensure the people in the communities that we serve that their safety is our top priority; and 5) support a more reasonable total sulfur specification.

# Potential Future Tariff Revisions Contemplated

As a side note, Northwest is a project investor in a study being conducted by the Gas Technology Institute ("GTI") which seeks to more accurately characterize the gas quality issues associated with bio-gas from dairy waste. This study is anticipated to be completed in July 2008. GTI anticipates that there will be enough interest and funding to conduct a similar study for landfill gas after the completion of the bio-gas study. With the additional knowledge and as certain technologies evolve, Northwest may need to consider further tariff revisions in the future.

# Tariff Revisions Not Being Proposed

Northwest has not yet made a tariff filing to address gas interchangeability. Northwest intends to make another filing, at a future date, to address: 1) the wobbe index; 2) total non-hydrocarbons; 3) maximum heating value; and 4) heavier hydrocarbons. Northwest has met with its customers several times in an attempt to agree upon these specifications and believes that an agreement is within reach, but that additional information from customers, primarily appliance testing data, is still required.

Also, as discussed above, Northwest intends to address and consider further revisions to its total sulfur specification to perhaps lower the acceptable amount below the five grains per one hundred cubic feet proposed herein.

Northwest has specifically excluded these specifications from the instant filing and respectfully requests that the Commission allow this proceeding to be limited to the specifications proposed herein so that a timely resolution can be implemented prior to the addition of bio-gas and/or landfill gas supplies on Northwest's system.

<sup>6</sup> See Tariff Sheet No. 182 for Williston Basin Interstate Pipeline Company.

Ms. Kimberly D. Bose June 16, 2008 Page 5 of 5

# Effective Date and Waiver Request

Northwest requests that the proposed tariff sheets be made effective July 16, 2008. Northwest also requests that the Commission grant any waivers it may deem necessary for the acceptance of this filing.

# **Procedural Matters**

Pursuant to the applicable provisions in Section 154 of the Commission's regulations, Northwest submits the following materials in connection with this filing:

- The proposed tariff sheets listed above.
- A redlined version of the proposed tariff sheets.
- A diskette containing the proposed tariff sheets in electronic form.

### Service and Communications

An original and five copies of this filing are being provided to the Commission. Copies of this filing have been served upon Northwest's customers and upon interested state regulatory commissions.

All other communications regarding this filing should be served by e-mail to:

Lynn Dahlberg
Manager, Certificates and Tariffs
(801) 584-6851
Northwest Pipeline GP
P.O. Box 58900
Salt Lake City, Utah 84158-0900
lynn.dahlberg@williams.com

Amy Harward
Attorney
(801) 584-6326
Northwest Pipeline GP
P.O. Box 58900
Salt Lake City, Utah 84158-0900
amy.harward@williams.com

The undersigned certifies that the contents of this filing are true and correct to the best of her knowledge and belief; that the paper and electronic versions of the submitted tariff sheets contain the same information; and that she possesses full power and authority to sign this filing.

Respectfully submitted,

Lynn Dahlberg

Lynn Dahlberg

Manager, Certificates and Tariffs

**Enclosures** 

### GENERAL TERMS AND CONDITIONS (Continued)

## QUALITY

- 3.1 Gas Quality at Receipt Points. All Gas delivered by Shipper to Transporter shall conform to the applicable specifications in either Section 3.1(a) or Section 3.1(b). As used in this section, the La Plata Facilities are defined as those facilities commencing at a measurement facility downstream of the discharge side of Northwest's La Plata B compressor station southward to the Blanco Hub, including the La Plata A compressor station and certain plant interconnects, all located in southern Colorado and northern New Mexico.
  - (a) All Gas delivered by Shipper to Transporter at Receipt Points not connected to the La Plata Facilities shall conform to the following specifications:
    - (1) Hydrocarbon Liquids and Liquefiables: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.
    - Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet and not more than five grains total sulfur per one hundred cubic feet.
    - Carbon Dioxide and Total Nonhydrocarbons: The gas shall contain not more than two percent by volume of carbon dioxide and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.

# GENERAL TERMS AND CONDITIONS Continued)

### 3. QUALITY (Continued)

- (4) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.
- (5) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.
- (6) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.
- (7) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees
  Fahrenheit.
- (8) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.
- (9) Mercury: The gas shall be free from any detectable mercury.
- (10) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

Effective: July 16, 2008

# GENERAL TERMS AND CONDITIONS (Continued)

#### QUALITY (Continued)

- (11) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.
- (b) All Gas delivered by Shipper to Transporter at Receipt Points connected to the La Plata Facilities shall conform to the following specifications:
  - (1) Hydrocarbon Liquids and Liquefiables: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.
  - (2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet of gas. The gas shall contain not more than 0.3 grains of mercaptan sulfur per one hundred cubic feet of gas. The gas shall contain not more than 0.75 grains of total sulfur per one hundred cubic feet of gas.

# GENERAL TERMS AND CONDITIONS (Continued)

#### 3. QUALITY (Continued)

- (3) Carbon Dioxide and Total Nonhydrocarbons: The gas shall contain not more than two percent by volume of carbon dioxide and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.
- (4) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.
- (5) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.
- (6) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.
- (7) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees Fahrenheit.
- (8) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.
- (9) Mercury: The gas shall be free from any detectable mercury.

# GENERAL TERMS AND CONDITIONS (Continued)

# QUALITY (Continued)

- (10) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.
- (11) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.

Issued by: Laren M.Gertsch, Director

Issued on: June 16, 2008

# GENERAL TERMS AND CONDITIONS (Continued)

#### QUALITY (Continued)

3.2 Gas Quality at Delivery Point(s). The gas delivered by Transporter to Shipper at the Delivery Point shall be natural gas containing a gross heating value of at least 985 Btus. Such gas shall be commercially free of dust, gums, dirt, impurities and other solid matter and shall not contain more than one-quarter grain hydrogen sulfide per one hundred cubic feet as determined by using commercially available on-line analyses and/or such analytical methods that are generally accepted in industry practice; provided that Transporter may install and utilize a recording hydrogen sulfide analyzer to monitor the gas at points at which it deems such continuous monitoring to be desirable. The gas to be delivered shall not contain more than twenty grains of total sulfur per one hundred cubic feet.

The gas shall be free of water and hydrocarbons in liquid form at the temperature and pressure at which the gas is delivered and in no event shall have a water content in excess of seven pounds in vapor phase per million cubic feet.

- 3.3 Determination of Gross Heating Value and Component Analysis. The party operating the measurement equipment shall determine the gross heating value of the gas delivered and its component analysis at reasonable intervals. Such determination shall be made using either an on-line chromatograph or by chromatographic analysis of a representative sample of gas taken with a continuous sampler. Transporter may at its option allow the use of spot samples. If at any time and for any reason Shipper or Transporter should question the results of any spot sampling, a redetermination shall be made and the redetermination mutually acceptable to the parties shall be used; provided, however, if neither party questions such results within a period of sixty (60) days following the determination thereof, then such results shall be deemed conclusive and binding upon the parties. Btu measuring equipment shall be installed at a location or locations where the gross heating value of the gas received or delivered hereunder may be reasonably determined.
- 3.4 Failure to Meet Specifications. Transporter or Shipper shall have the right, exercisable by the giving of written or oral notice to the other party, to require the remedy of any failure to deliver or redeliver gas in accordance with the quality specifications set forth in Sections 3.1 and 3.2. In the event gas delivered by either party fails to conform to such specifications, as evidenced by the latest chromatograph analysis derived from an on-line chromatograph or from a sample taken manually and analyzed by a chromatograph, or from any other verifiable evidence, the receiving party may refuse to accept all or any portion of such gas.

# GENERAL TERMS AND CONDITIONS (Continued)

### 3. QUALITY (Continued)

3.6 Gas Analysis Equipment. If Transporter, in its reasonable judgment, determines that any additional or modified Gas analysis or control equipment is needed to accurately monitor the quality of Gas received at an existing Receipt Point and control the receipt of Gas failing to conform to the applicable quality specifications, then the Shipper(s) desiring to nominate at such Receipt Point will cause the interconnecting party at such Receipt Point to install such necessary additional or modified equipment.

Unless otherwise mutually agreed, if Transporter installs such additional or modified Gas analysis or control equipment, the interconnecting party will provide a contribution in aid of construction to Transporter for all actual costs incurred by Transporter, and reimburse Transporter for any related income taxes. The related income taxes will be the difference between Transporter's current federal and state income tax liability resulting from the contribution in aid of construction and the present value of Transporter's future tax benefits resulting from tax depreciation on such facilities, grossed-up for income taxes. The cash flow discount factor for the present value calculation will be the most recent weighted cost of capital percentage specifically approved by the Commission for deriving Transporter's Recourse Rates.

#### NORTHWEST PIPELINE GP

#### First Revised Sheet No. 204

# GENERAL TERMS AND CONDITIONS (Continued)

#### 3. QUALITY

- 3.1 Gas Quality at Receipt Points. All Gas delivered by Shipper to Transporter shall conform to the applicable specifications in either Section 3.1(a) or Section 3.1(b). As used in this section, the La Plata Facilities are defined as those facilities commencing at a measurement facility downstream of the discharge side of Northwest's La Plata B compressor station southward to the Blanco Hub, including the La Plata A compressor station and certain plant interconnects, all located in southern Colorado and northern New Mexico.
  - (a) All Gas delivered by Shipper to Transporter at Receipt Points not connected to the La Plata Facilities shall conform to the following specifications:
    - (1) Hydrocarbon Liquids and Liquefiables: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.
    - (2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet and not more than twenty five grains total sulfur per one hundred cubic feet.
    - (3) Carbon Dioxide and Total Nonhydrocarbons: The gas shall contain not more than two percent by volume of carbon dioxide and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.
    - (4) Dust, Gums, etc.: The gas shall be commercially free of dust, gums, dirt, impurities and other solid matter.
    - (5) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.

# First Revised Sheet No. 204-A

# GENERAL TERMS AND CONDITIONS Continued)

#### 3. QUALITY (Continued)

- (4) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.
- (5) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.
- (6) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.
- (7) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees Fahrenheit.
- (8) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.
- (9) Mercury: The gas shall be free from any detectable mercury.
- (10) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.
- (b) All Gas delivered by Shipper to Transporter at Receipt Points connected to the La Plata Facilities shall conform to the following specifications:
  - (1) Hydrocarbon Liquids and Liquefiables: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100-psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and

remain the exclusive property of Transporter, except as specified in Section 20 of the Ceneral Terms and Conditions.

(2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet of gas. The gas shall contain not more than 0.3 grains of mercaptan sulfur per one hundred cubic feet of gas. The gas shall contain not more than 0.75 grains of total sulfur per one hundred cubic feet of gas.

#### First Revised Sheet No. 204-B

# GENERAL TERMS AND CONDITIONS (Continued)

#### 3. QUALITY (Continued)

- (11) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.
- (b) All Gas delivered by Shipper to Transporter at Receipt Points connected to the La Plata Facilities shall conform to the following specifications:
  - (1) Hydrocarbon Liquids and Liquefiables: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.
  - (2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet of gas. The gas shall contain not more than 0.3 grains of mercaptan sulfur per one hundred cubic feet of gas. The gas shall contain not more than 0.75 grains of total sulfur per one hundred cubic feet of gas.
  - (3) Carbon Dioxide and Total Nonhydrocarbons: The gas shall contain not more than two percent by volume of carbon dioxide and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.
  - (4) Dust, Gums, etc.: The gas shall be commercially-free from objectionable odors, solid matter, dust, gums, and gum forming constituents, or any other substance which interferes

with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.

- (5) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.
- (6) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.
- (7) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees Fahrenheit.
- (8) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.
- (9) Mercury: The gas shall be free from any detectable mercury.
- (10) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

### Original Sheet No. 204-C

# GENERAL TERMS AND CONDITIONS (Continued)

### 3. QUALITY (Continued)

- (3) Carbon Dioxide and Total Nonhydrocarbons: The gas shall contain not more than two percent by volume of carbon dioxide and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.
- (4) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.
- (5) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.
- (6) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.
- (7) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees
  Fahrenheit.
- (8) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.
- (9) Mercury: The gas shall be free from any detectable mercury.

### Original Sheet No. 204-D

# GENERAL TERMS AND CONDITIONS (Continued)

### 3. QUALITY (Continued)

(10) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

(11) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.

### First Revised Sheet No. 205

# GENERAL TERMS AND CONDITIONS (Continued)

#### 3. QUALITY (Continued)

3.2 Gas Quality at Delivery Point(s). The gas delivered by Transporter to Shipper at the Delivery Point shall be natural gas containing a gross heating value of at least 985 Btus. Such gas shall be commercially free of dust, gums, dirt, impurities and other solid matter and shall not contain more than one-quarter grain hydrogen sulfide per one hundred cubic feet as determined by using commercially available on-line analyses and/or such analytical methods that are generally accepted in industry practice; provided that Transporter may install and utilize a recording hydrogen sulfide analyzer to monitor the gas at points at which it deems such continuous monitoring to be desirable. The gas to be delivered shall not contain more than twenty grains of total sulfur per one hundred cubic feet.

The gas shall be free of water and hydrocarbons in liquid form at the temperature and pressure at which the gas is delivered and in no event shall have a water content in excess of seven pounds in vapor phase per million cubic feet.

- 3.3 Determination of Gross Heating Value and Component Analysis. The party operating the measurement equipment shall determine the gross heating value of the gas delivered and its component analysis at reasonable intervals. Such determination shall be made using either an on-line chromatograph or by chromatographic analysis of a representative sample of gas taken with a continuous sampler. Transporter may at its option allow the use of spot samples. If at any time and for any reason Shipper or Transporter should question the results of any spot sampling, a redetermination shall be made and the redetermination mutually acceptable to the parties shall be used; provided, however, if neither party questions such results within a period of sixty (60) days following the determination thereof, then such results shall be deemed conclusive and binding upon the parties. Btu measuring equipment shall be installed at a location or locations where the gross heating value of the gas received or delivered hereunder may be reasonably determined.
- 3.4 Failure to Meet Specifications. Transporter or Shipper shall have the right, exercisable by the giving of written or oral notice to the other party, to require the remedy of any failure to deliver or redeliver gas in accordance with the quality specifications set forth in Sections 3.1 and 3.2. In the event gas delivered by either party fails to conform to such specifications, as evidenced by the latest chromatograph analysis derived from an on-line chromatograph or from a sample taken manually and analyzed by a chromatograph, or from any other verifiable evidence, the receiving party may refuse to accept all or any portion of such gas.

#### Original Sheet No. 205-B

# GENERAL TERMS AND CONDITIONS (Continued)

# 3. QUALITY (Continued)

3.6 Gas Analysis Equipment. If Transporter, in its reasonable judgment, determines that any additional or modified Gas analysis or control equipment is needed to accurately monitor the quality of Gas received at an existing Receipt Point and control the receipt of Gas failing to conform to the applicable quality specifications, then the Shipper(s) desiring to nominate at such Receipt Point will cause the interconnecting party at such Receipt Point to install such necessary additional or modified equipment.

Unless otherwise mutually agreed, if Transporter installs such additional or modified Gas analysis or control equipment, the interconnecting party will provide a contribution in aid of construction to Transporter for all actual costs incurred by Transporter, and reimburse Transporter for any related income taxes. The related income taxes will be the difference between Transporter's current federal and state income tax liability resulting from the contribution in aid of construction and the present value of Transporter's future tax benefits resulting from tax depreciation on such facilities, grossed-up for income taxes. The cash flow discount factor for the present value calculation will be the most recent weighted cost of capital percentage specifically approved by the Commission for deriving Transporter's Recourse Rates.